CLAIMS

1. A method of updating an inverse ARP table in an IP network over a partially meshed Frame Relay network wherein the Frame Relay network includes at least one hub which is linked to each one of a plurality of spokes by a Permanent Virtual Circuit (PVC), said PVC being identified by a first Data Link Connection Identifier (DLCI) associated with said hub and a second DLCI associated with said spoke, said hub and said set of spokes defining an IP subnet having a subnet address, and each spoke having an inverse ARP table in which said first DLCI identifying a PVC is mapped with the IP address of said hub as entry, said method comprising the steps of:

    defining said first DLCI being mapped with a default address identifying said hub as the destination for any frame addressed to one or more spokes on said subnet; and

    automatically entering said default address as an entry into said inverse ARP table.

2. The method of updating an inverse ARP table according to claim 1, wherein said default IP address entered into said inverse ARP table is the IP address of said subnet.

3. The method of updating an inverse ARP table according to claim 1, wherein said default IP address entered into said inverse ARP table is a specific IP address when there is a single subnet in which all the spokes are linked to said hub.

4. The method of claim 1 further comprising the step of forwarding any frame received from a spoke of said subnet directly to the destination without passing said frame to the IP layer when said destination is another spoke of said subnet.

5. The method of claim 1 further comprising the step of broadcasting any broadcast frame received from a spoke of said subnet directly to all the spokes of said subnet without passing said frame to the IP layer.

6. The method of claim 1 wherein said network further comprises a backup hub for said subnet, said backup hub being linked to all spokes of said subnet and to the primary hub, said method further comprising said backup hub sending an inverse ARP request to each spoke with a source IP address being said default address to be used for said subnet.

7. An IP network over a partially meshed Frame Relay network comprising:

at least one hub which is linked to each one of a plurality of spokes by a Permanent Virtual Circuit (PVC), said PVC being identified by a first Data Link Connection Identifier (DLCI) associated with said hub and a second DLCI associated with said spoke, said hub and said set of spokes defining an IP subnet having a subnet address, and each spoke having an inverse ARP table in which said first DLCI identifying a PVC is mapped with the IP address of said hub as entry; and

means for defining said first DLCI being mapped with a default address identifying said hub as the destination for any frame addressed to one or more spokes on said subnet and for automatically entering said default address as an entry into said inverse ARP table.

8. The IP network of claim 7 wherein said hub comprises means for forwarding any frame received from a spoke of said subnet directly to the destination without passing said frame to the IP layer when said destination is another spoke of said subnet.

9. The IP network of claim 7 wherein said hub comprises means for broadcasting any broadcast frame received from a spoke of

said subnet directly to all the spokes of said subnet without passing said frame to the IP layer.

10. The IP network of claim 7 further comprising a backup hub for said subnet, said backup hub being linked to all spokes of said subnet and to the primary hub, and said backup hub being not active as long as it does not loose the connectivity with said primary hub.

11. The IP network of claim 10, wherein said backup hub sends an inverse ARP request to each spoke with a source IP address being said default IP address to be used for said subnet.

12. The IP network of claim 8 further comprising a backup hub for said subnet, said backup hub being linked to all spokes of said subnet and to the primary hub, and said backup hub being not active as long as it does not loose the connectivity with said primary hub.

13. The IP network of claim 12, wherein said backup hub sends an inverse ARP request to each spoke with a source IP address being said default IP address to be used for said subnet.

14. The IP network of claim 9 further comprising a backup hub for said subnet, said backup hub being linked to all spokes

of said subnet and to the primary hub, and said backup hub being not active as long as it does not loose the connectivity with said primary hub.

15. The IP network of claim 14, wherein said backup hub sends an inverse ARP request to each spoke with a source IP address being said default IP address to be used for said subnet.